SANTA CRUZ BIOTECHNOLOGY, INC.

CIB2 siRNA (m): sc-105205

BACKGROUND

CIB2 (calcium and integrin-binding family member 2) is a 187 amino acid protein encoded by the human gene CIB2. CIB2 is a ubiquitously expressed protein that contains three EF-hand domains. CIB2 is closely related to CIB1 (CIB1 has one less EF-hand domain), which is known to bind to Integrin αIIbβ in platelets and is involved in signal transduction. CIB2 expression is significantly reduced in Laminin α-2 chain deficient muscle, but is unaffected in the mouse model for Duchenne muscular dystrophy. This indicates that CIB2 is likely involved in the pathogenesis of MDC1A, a congenital muscular dystrophy caused by mutations in the gene encoding Laminin α-2 chain. CIB2 also binds to Integrin α7 and calcium, indicating that CIB2 has various functions in signalling pathways.

REFERENCES

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4. Lalande, M., et al. 2007. Molecular epigenetics of Angelman syndrome. Cell. Mol. Life Sci. 64: 947-960.
5. Maegawa, G.H., et al. 2007. Pyrimethamine as a potential pharmacological chaperone for late-onset forms of GM2 gangliosidosis. J. Biol. Chem. 282: 9150-9161.
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CHROMOSOMAL LOCATION

Genetic locus: Cib2 (mouse) mapping to 9 A5.3.

PRODUCT

CIB2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CIB2 shRNA Plasmid (m): sc-105205-SH and CIB2 shRNA (m) Lentiviral Particles: sc-105205-V as alternate gene silencing products.

For independent verification of CIB2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-105205A, sc-105205B and sc-105205C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CIB2 siRNA (m) is recommended for the inhibition of CIB2 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CIB2 gene expression knockdown using RT-PCR Primer: CIB2 (m)-PR: sc-105205-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.